

TAWI



CE

User manual for TAWI ViperHoist

EC Declaration of Conformity

As defined in Machinery Directive 2006/42/EC Annex IIA

Manufacturer: TAWI AB
Box 10205, 434 23 Kungsbacka, Sweden

Authorized Representative: Name;.....
Company;.....
Address;.....

Machine Description:
Product Group; ViperHoist
Product Type;
Serial Number;

It is hereby confirmed that the machine mentioned is in compliance with the Machinery Directive 2006/42/EC and also corresponding to:

- Directive 2006/95/EC Low Voltage Directive
- Directive 2004/108/EC EMC Directive
- Directive ____ / ____ / ____ Additional directives, ATEX , Pressure Vessels

The following harmonizing standards also apply;

| 2006/42/EC | 2006/95/EC | 2004/108/EC |
|----------------------|------------|-------------|
| SS-EN ISO 12100:2010 | | |
| SS-EN 60204-32 | | |
| | | |
| | | |

Place; KUNGSBACKA, SWEDEN

Date;

Signature; 
Thomas Bräutigam, CEO TAWI Holding

Signature; 
Jonas Lindholm, Responsible for the technical dossier

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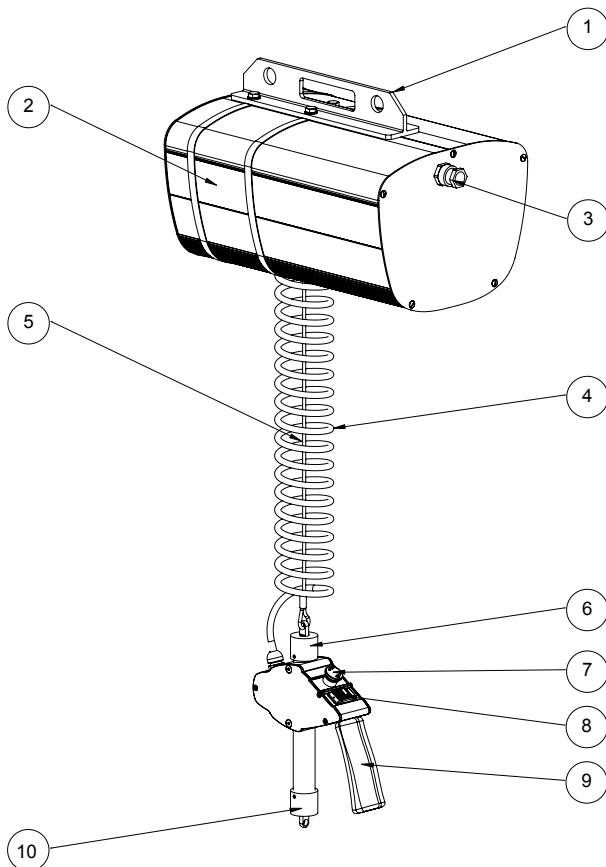
1 General description

1. General description

Congratulations on your choice of TAWI lifting equipment! The following pages introduces you to your new ^{TAWI} ViperHoist. Read this manual carefully before operating.

Guarantee

Time of guarantee is 1 year from date of delivery. This guarantee covers the replacement or repair of defect parts of the hoist. The warranty is valid only if original spare parts have been used and all instructions of this manual have been followed.



1. Suspension. The hoist is designed to be suspended in two track trolleys. Use for ergonomic handling when lifting the hoist.
2. Top unit.
3. Power supply 230V 50Hz/60Hz. The hoist can be connected to all electric supply networks with current as listed above. The power supply must have a 10A fuse.
4. Maneuver cable. The maneuver cable is a screened multi conductor cable and may not be replaced with anything but original parts.
5. Lifting wire. May only be replaced with original spare parts.
6. Wire attachment. Swiveling attachment. Blocking the swivel will cause serious damage to the wire.
7. Emergency stop. Locked by pushing, released by turning the knob.
8. Operation thumb wheel. Controls lifting speed and direction. Move left to go down. Move right to go up.
9. Handle
10. Hook attachment. Swiveling attachment for unlimited rotation of hook.

| Specification: | | |
|------------------|--------------|--------------|
| Lifting capacity | 60 kg | 120 kg |
| Power supply | 230V +/- 10% | 230V +/- 10% |
| Frequency | 47-63 Hz | 47-63 Hz |
| Lifting height | 2000 mm | 2000 mm |
| Lifting speed | 0.75 m/s | 0.35 m/s |
| Dead weight | 25 kg | 25 kg |
| Speed control | Variable | Variable |

Warnings and labels



WARNING! Read the instructions manual carefully before using the hoist.

Operating handle. The maximum lifting capacity of the two hoists. Please view which maximum lifting capacity applies to your hoist.

The controls for lifting up and down consist of one flip button that can be turned sideways. Turn right to lift up and turn left to lower the load.

View product type and serial number on your hoist.

Emergency button.

2 Installation

1. Check that the delivery corresponds with the delivery note. The hoist is delivered fully assembled.
2. Make sure that the suspension device is approved for minimum 1,5 x maximum lifting capacity of the hoist. The suspension chosen must be approved for lifting purposes and designed for a maximum lifting capacity of AT LEAST the weight of the load AND the dead weight of the hoist.
3. The hoist is designed to be suspended in two track trolleys.
4. Connect the power supply cable to electric supply network (10A fuse).



NOTE! Step 4 must be performed by authorised electrician.

THE HOIST IS NOW READY TO USE AFTER THE PRELIMINARY CHECK HAS BEEN PERFORMED.

3 User's guide

Operating instructions:

Operating the hoist is accomplished by moving the thumb wheel left (down) or right (up). The lifting speed is adjusted by means of increasing/decreasing the angle the thumb wheel is moved.

Preliminary check:

Check the function of the upper limit switch by running the hoist upwards until the switch stops the hoist. This switch is to be considered as an emergency stop switch and it should not be used in the daily operation. When running downwards the wire will stop feeding out automatically when the load/hook reaches the floor or if the lower switch is activated.

The hoist is equipped with an electrically operated break that automatically breaks the movement when the thumb wheel is moved to neutral position. The break function produces a slight clicking sound, which is normal for this type of break equipment.



NOTE! Never use the hoist if damage has been found. Contact your dealer for repair.

4 Safety Instructions

To ensure maximum personal safety it is essential to avoid all incorrect use:

- Do not allow untrained staff to operate the hoist.
- Do not exceed the hoists maximum lifting capacity.
- Never use the hoist for lifting person/persons.
- Never leave load hanging in the hoist.
- Never move or stand below hanging load.
- Never use the lifting wire as earth lead when welding.
- Never use the hoist to tow goods on the floor.
- Repairs and/or adjustments may only be performed by authorised personnel.
- Always read the manual carefully before using the hoist.
- Make sure that the load is well balanced before lifting.



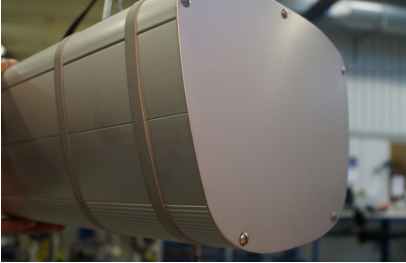
Caution!

- Neglect in following the safety instructions may cause serious bodily harm.
- The operator must be fully trained in handling the hoist.
- All instructions in this manual must be followed at all times.
- The crane system/suspension unit must be installed by authorised personnel and all safety regulations must be followed. DO NOT EXCEED maximum lifting capacity. (Dead weight of hoist+weight of load).
- Maintenance instructions must be followed and only original spare parts may be used.
- The suspension must be thoroughly checked on a regular basis.
- Electrical installations/alterations may only be carried out by authorised electricians.

5 Service record

| SERVICE RECORD ^{TAWI} ViperHoist | | |
|---|-----------------|-------------------|
| Periodical inspection: | Frequency* | |
| | Daily intervals | Monthly intervals |
| Thoroughly check the lifting wire, fasteners and hook for damage and wear. | X | |
| Check the function of the emergency stop switch before using the hoist. | X | |
| Check all suspensions for sign of wear. | | X |
| Check the lifting wire for wear and damage. | | X |
| Check the maneuver cable for wear and damage. | | X |
| Check that the speed control is working properly during the whole stroke. | | X |
| Check the function of the emergency switch. | | X |
| Check the function of the upper and lower limit switch. | | X |
| <p>*These intervals should be considered as a binding recommendation and are applicable at normal operating conditions, as specified by the warranty at 8 h operation/day. Special conditions may require other intervals. For instance a dusty environment may require shorter intervals. Longer intervals invalidates the warranty.</p> | | |

6 Change wire



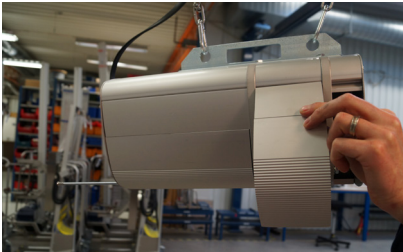
1. Unscrew the two lower nuts for the cover on the side closest to the wire.



2. Same as picture no 1, detailed picture.



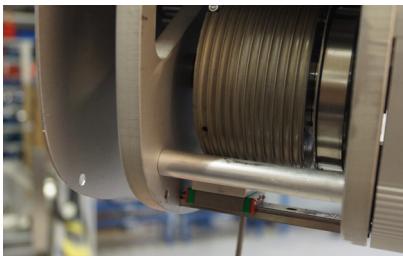
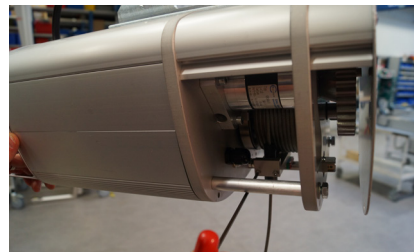
3. Pull out the two threaded bars on the opposite side, approximately 150mm, until the first and second cover profiles are loose.



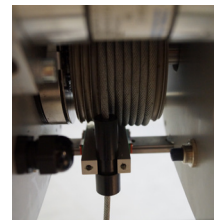
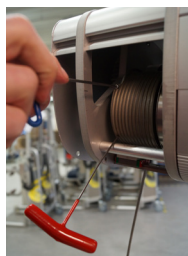
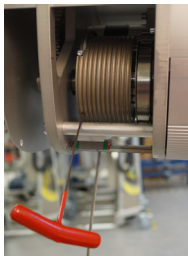
4. Remove the first cover profiles.



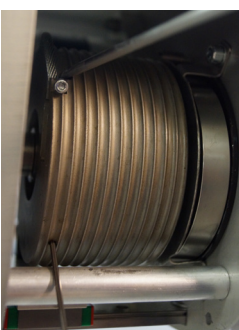
5. Remove the second cover profiles



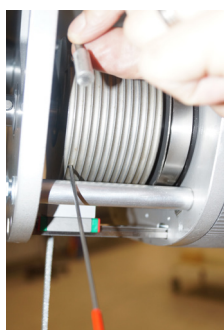
7. Run the hoist to its lowest position. In the wire reel there is a small hole, place a 2mm Allen key in the hole to prevent the return spring from winding up the wire.



6. Use a 3 mm Allen key and remove the bracket for the wire guide holder.



8. Remove the wire sideways from the wire reel. Use a flat screw driver.

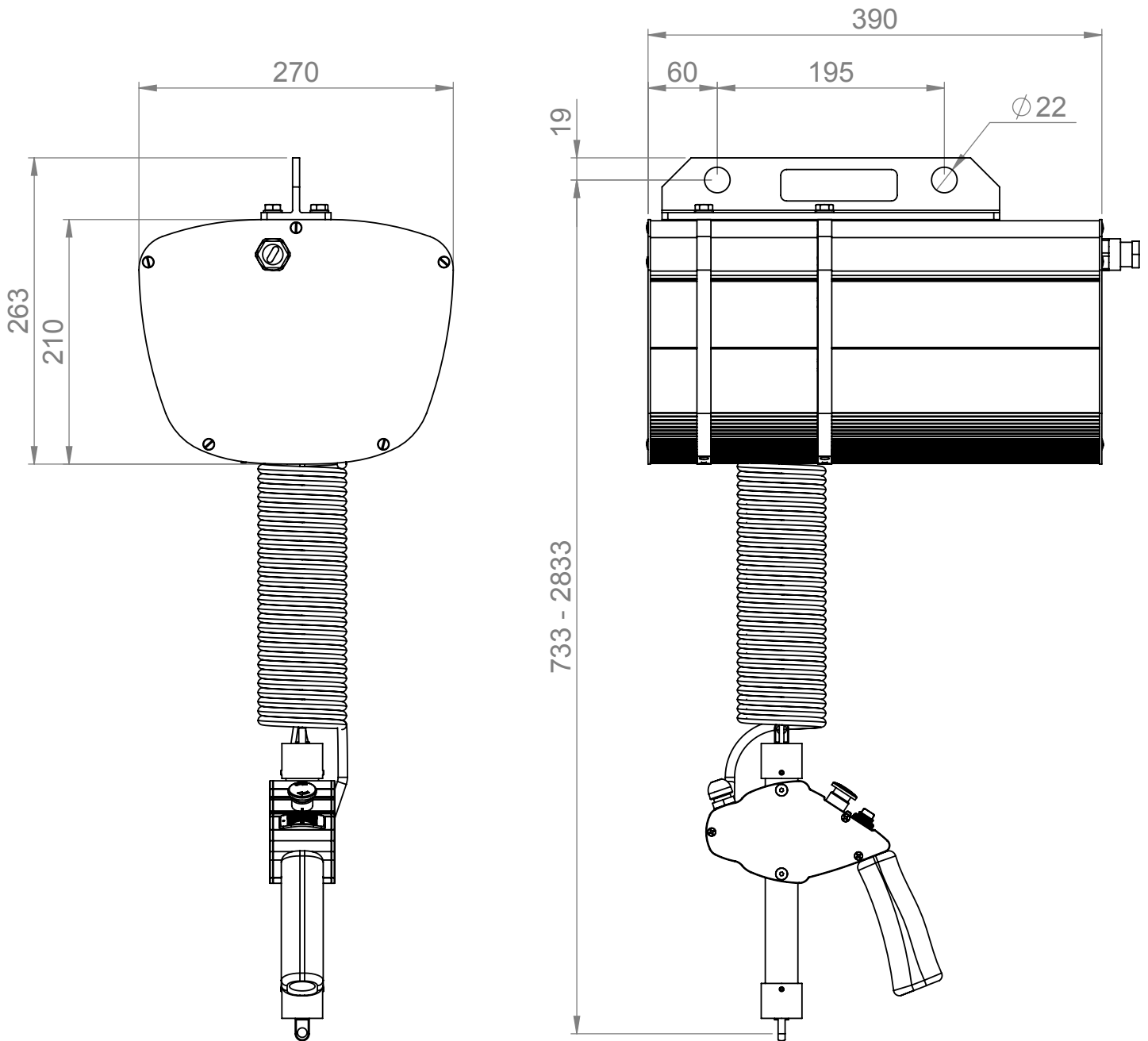


9. Remove the wire and the wire guide.

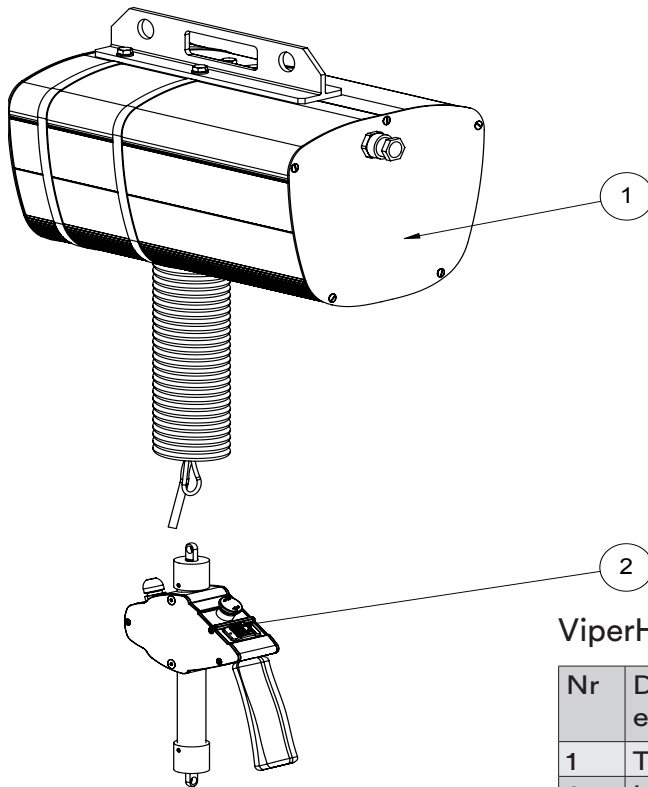


10. Assemble a new wire and wire guide. Repeat above steps in opposite order.

7 Dimensions, general overview

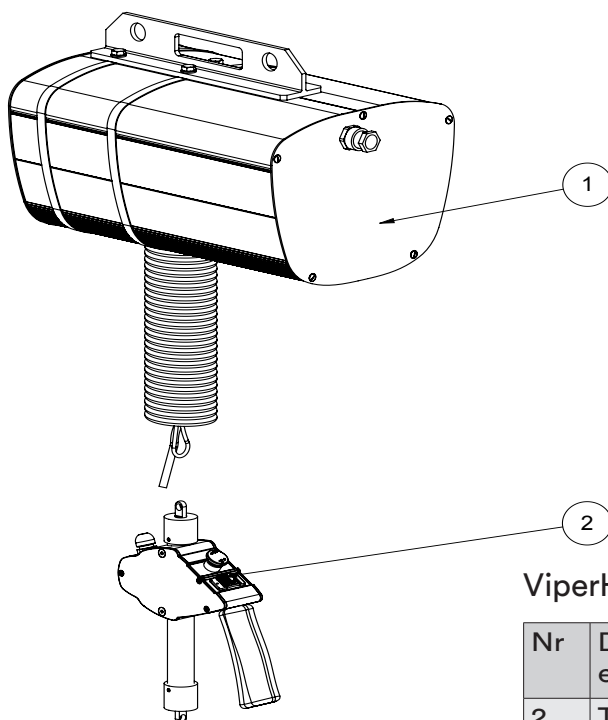


8 ViperHoist60/120



ViperHoist60

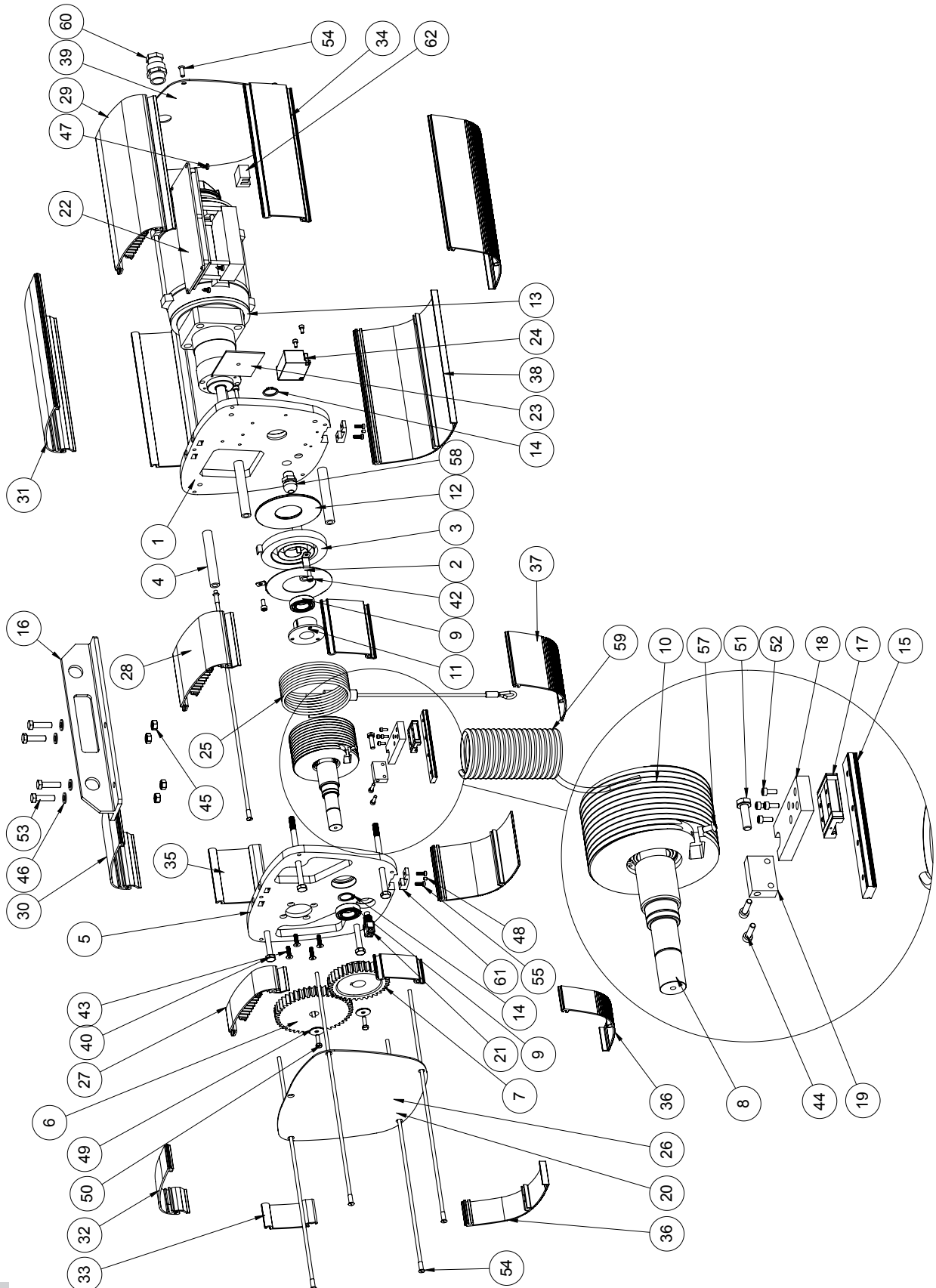
| Nr | Description (available in english only) | Pcs | Art nr |
|----|---|-----|--------|
| 1 | Top unit, ViperHoist60 | 1 | 254000 |
| 2 | Handle, complete | 1 | 256000 |



ViperHoist120

| Nr | Description (available in english only) | Pcs/ | Art nr |
|----|---|------|--------|
| 2 | Top unit, ViperHoist120 | 1 | 255000 |
| 1 | Handle complete | 1 | 256000 |

9 Exploded view and parts list, top unit ViperHoist60/120



TAWI ViperHoist60

| Nr | Description (available in english only) | Pcs | Art nr |
|----|---|-----|--------|
| 1 | Motor plate | 1 | 255060 |
| 2 | Spring holder | 1 | 255110 |
| 3 | Coil | 1 | 255120 |
| 4 | Distance | 4 | 255130 |
| 5 | Gear plate | 1 | 255050 |
| 6 | Motor wheel | 1 | 255235 |
| 7 | Drum wheel | 1 | 255245 |
| 8 | Shaft | 1 | 255080 |
| 9 | Ball bearing | 2 | 255140 |
| 10 | Wire drum, complete | 1 | 255075 |
| 11 | Spring attachment | 1 | 255160 |
| 12 | Slide plate | 1 | 255170 |
| 13 | Motor, cmpl | 1 | 255193 |
| 14 | Retaining ring | 2 | SGA 20 |
| 15 | Rail | 1 | 255250 |
| 16 | Suspension | 1 | 255210 |
| 17 | Trolley | 1 | 255255 |
| 18 | Wire guide | 1 | 255099 |
| 19 | Stop for wire guide | 1 | 255100 |
| 20 | Threaded bar, M5 | 5 | 255270 |
| 21 | Micro switch | 2 | 255260 |
| 22 | Control board | 1 | 255195 |
| 23 | Brake resistor | 1 | 255192 |
| 24 | Rectifier | 1 | 255191 |
| 25 | Wire, complete with guide | 1 | 255096 |
| 26 | End cover | 1 | 255220 |
| 27 | Top profile, left | 1 | 255010 |
| 28 | Top profile, left | 1 | 255011 |
| 29 | Top profile, left | 1 | 255012 |
| 30 | Top profile, right | 1 | 255021 |
| 31 | Top profile, right | 1 | 255022 |
| 32 | Top profile, right | 1 | 255020 |

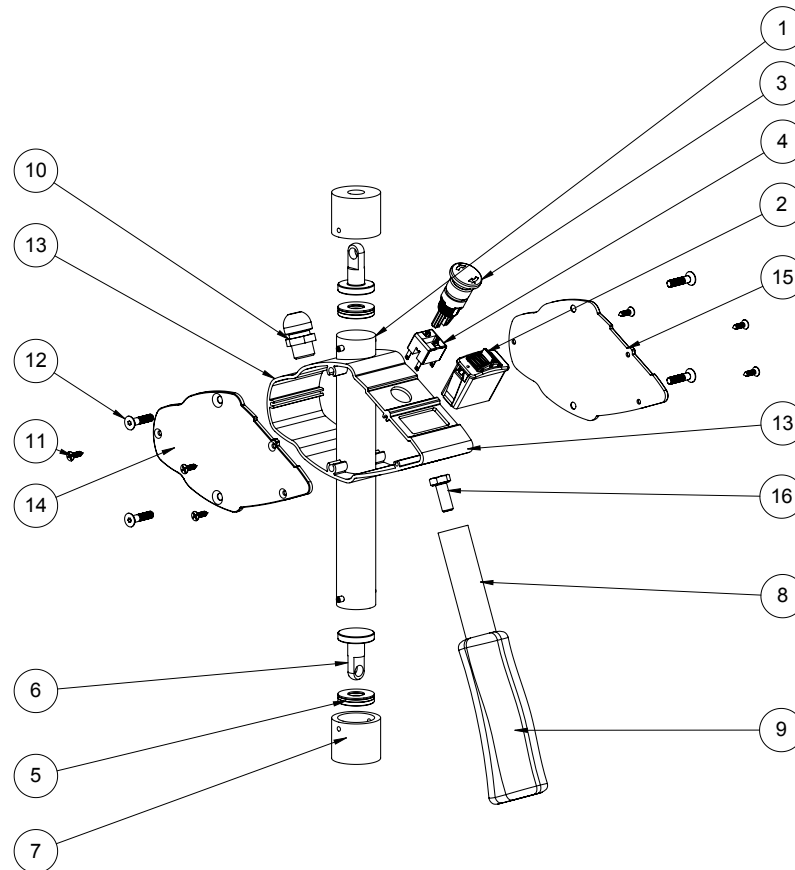
| Nr | Description (available in english only) | Pcs | Art nr |
|----|---|-----|-----------------|
| 33 | Side profile | 2 | 255030 |
| 34 | Side profile | 2 | 255032 |
| 35 | Side profile | 2 | 255031 |
| 36 | Bottom profile | 2 | 255040 |
| 37 | Bottom profile | 2 | 255041 |
| 38 | Bottom profile | 2 | 255042 |
| 39 | End cover | 1 | 255225 |
| 40 | Screw | 4 | M6S M8x120 8.8 |
| 41 | Screw | 1 | MC6S M5x25 8.8 |
| 42 | Screw | 3 | MC6S M5x12 8.8 |
| 43 | Screw | 4 | MF6S M5x18 8.8 |
| 44 | Screw | 2 | MC6S M4x16 8.8 |
| 45 | Nut | 4 | M6M M8 |
| 46 | Washer | 4 | BRB 8.4x16x1.6 |
| 47 | Screw | 4 | RTS 4.2x9.5 |
| 48 | Set screw | 2 | SK6SS M4x5 |
| 49 | Washer | 2 | BRB 5.5x22x1.4 |
| 50 | Screw | 2 | M6S M5x16 |
| 51 | Screw | 1 | M6S M6x20 8.8 |
| 52 | Screw | 4 | MC6S M3x8 8.8 |
| 53 | Screw | 4 | M6S M8x30 8.8 |
| 54 | Sleeve nut | 10 | KFHM M5x15 A2 |
| 55 | Screw | 4 | MC6LS M4x12 8.8 |
| 56 | Screw | 2 | MC6S M4x8 8.8 |
| 57 | Screw | 1 | K6S M4x8 8.8 |
| 58 | Conduit entry | 1 | 8eka357 |
| 59 | Spiral cable | 1 | 251052 |
| 60 | Conduit entry | 1 | 251035 |
| 61 | Bracket | 2 | 255055 |
| 62 | Terminal w/ fuse | 1 | 251097 |
| 63 | Cable kit ViperHoist | 1 | 255280 |
| 64 | Bracket | 2 | 255055 |

TAWI ViperHoist120

| Nr | Description (available in english only) | Pcs | Art nr |
|----|---|-----|--------|
| 1 | Motor plate | 1 | 255060 |
| 2 | Spring holder | 1 | 255110 |
| 3 | Coil | 1 | 255120 |
| 4 | Distance | 4 | 255130 |
| 5 | Gear plate | 1 | 255050 |
| 6 | Motor wheel | 1 | 255230 |
| 7 | Drum wheel | 1 | 255240 |
| 8 | Shaft | 1 | 255080 |
| 9 | Ball bearing | 2 | 255140 |
| 10 | Wire drum, complete | 1 | 255075 |
| 11 | Spring attachment | 1 | 255160 |
| 12 | Slide plate | 1 | 255170 |
| 13 | Motor, cmpl | 1 | 255193 |
| 14 | Retaining ring | 2 | SGA 20 |
| 15 | Rail | 1 | 255250 |
| 16 | Suspension | 1 | 255210 |
| 17 | Trolley | 1 | 255255 |
| 18 | Wire guide | 1 | 255099 |
| 19 | Stop for wire guide | 1 | 255100 |
| 20 | Threaded bar, M5 | 5 | 255270 |
| 21 | Micro switch | 2 | 255260 |
| 22 | Control board | 1 | 255195 |
| 23 | Brake resistor | 1 | 255192 |
| 24 | Rectifier | 1 | 255191 |
| 25 | Wire, complete with guide | 1 | 255096 |
| 26 | End cover | 1 | 255220 |
| 27 | Top profile, left | 1 | 255010 |
| 28 | Top profile, left | 1 | 255011 |
| 29 | Top profile, left | 1 | 255012 |
| 30 | Top profile, right | 1 | 255021 |
| 31 | Top profile, right | 1 | 255022 |
| 32 | Top profile, right | 1 | 255020 |

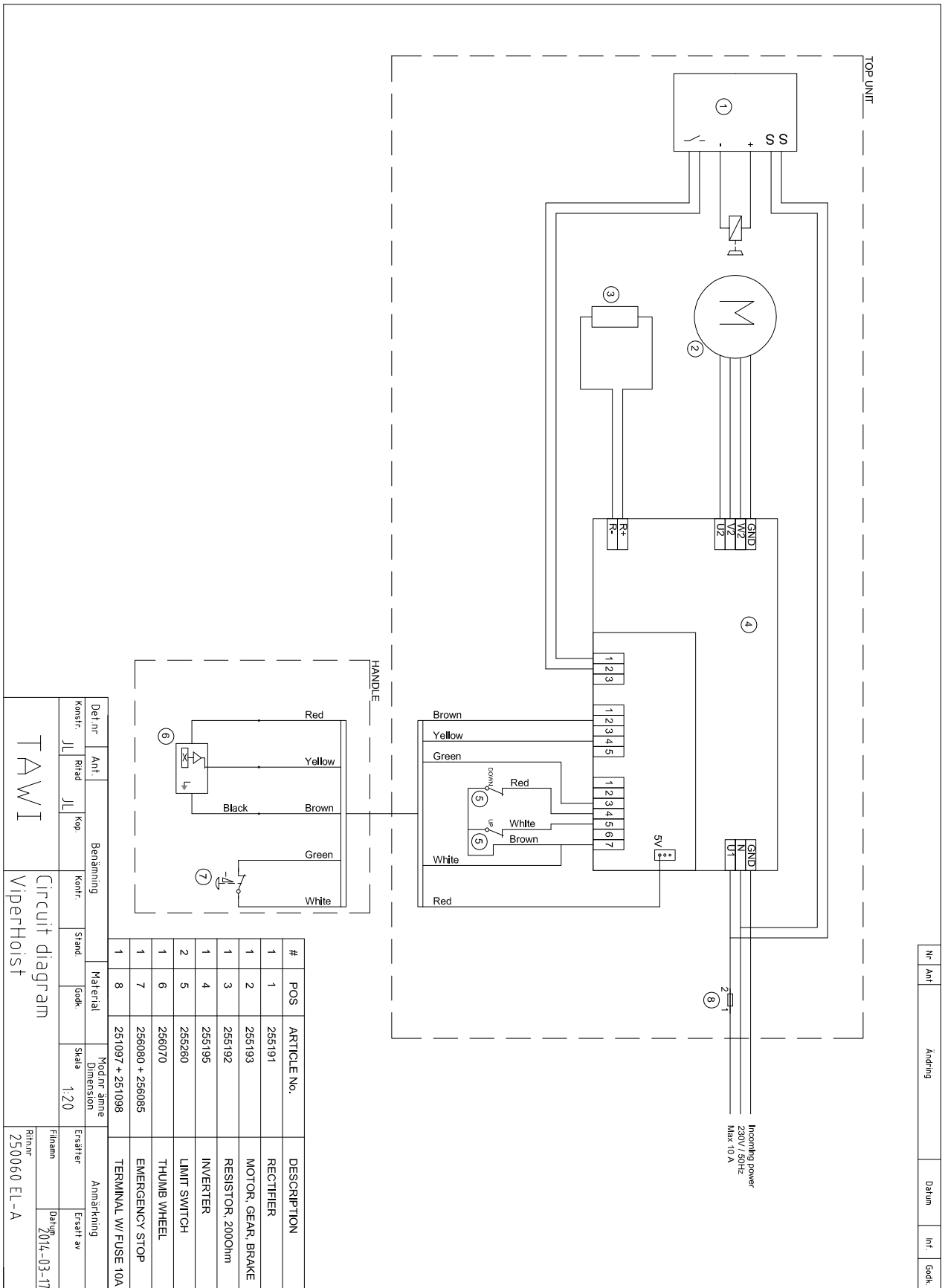
| Nr | Description (available in english only) | Pcs | Art nr |
|----|---|-----|-----------------|
| 33 | Side profile | 2 | 255030 |
| 34 | Side profile | 2 | 255032 |
| 35 | Side profile | 2 | 255031 |
| 36 | Bottom profile | 2 | 255040 |
| 37 | Bottom profile | 2 | 255041 |
| 38 | Bottom profile | 2 | 255042 |
| 39 | End cover | 1 | 255225 |
| 40 | Screw | 4 | M6S M8x120 8.8 |
| 41 | Screw | 1 | MC6S M5x25 8.8 |
| 42 | Screw | 3 | MC6S M5x12 8.8 |
| 43 | Screw | 4 | MF6S M5x18 8.8 |
| 44 | Screw | 2 | MC6S M4x16 8.8 |
| 45 | Nut | 4 | M6M M8 |
| 46 | Washer | 4 | BRB 8.4x16x1.6 |
| 47 | Screw | 4 | RTS 4.2x9.5 |
| 48 | Set screw | 2 | SK6SS M4x5 |
| 49 | Washer | 2 | BRB 5.5x22x1.4 |
| 50 | Screw | 2 | M6S M5x16 |
| 51 | Screw | 1 | M6S M6x20 8.8 |
| 52 | Screw | 4 | MC6S M3x8 8.8 |
| 53 | Screw | 4 | M6S M8x30 8.8 |
| 54 | Sleeve nut | 10 | KFHM M5x15 A2 |
| 55 | Screw | 4 | MC6LS M4x12 8.8 |
| 56 | Screw | 2 | MC6S M4x8 8.8 |
| 57 | Screw | 1 | K6S M4x8 8.8 |
| 58 | Conduit entry | 1 | 8eka357 |
| 59 | Spiral cable | 1 | 251052 |
| 60 | Conduit entry | 1 | 251035 |
| 61 | Bracket | 2 | 255055 |
| 62 | Terminal w/ fuse | 1 | 251097 |
| 63 | Cable kit ViperHoist | 1 | 255280 |
| 64 | Bracket | 2 | 255055 |

10 Exploded view and parts list, operating handle



| Nr | Description (available in english only) | Pcs | Art nr |
|----|---|-----|------------------|
| 1 | Tube $\varnothing 28$ | 1 | 256020 |
| 2 | Thumb wheel | 1 | 256070 |
| 3 | Emergency button | 1 | 256080 |
| 4 | Emergency block | 1 | 256085 |
| 5 | Needle roller thrust bearing | 2 | 252003 |
| 6 | Hook bracket | 2 | 252015 |
| 7 | Bottom svivel bracket | 2 | 256030 |
| 8 | Handle tube | 1 | 256060 |
| 9 | Handle | 1 | 671202 |
| 10 | Conduit entry | 1 | 8eka357 |
| 11 | Screw | 6 | FXS 3,5×13 |
| 12 | Screw | 4 | MF6S M5×22 A4 |
| 13 | Handle profile | 1 | 256010 |
| 14 | End cover, left | 1 | 256040 |
| 15 | End cover, right | 1 | 256050 |
| 16 | Bolt | 1 | M6S M8×20 |
| 17 | Set screw | 4 | SK6SS M4×5 |

11 Electric schedule



12 ViperHoist handling analysis

ISSUE: B

VIPERHOIST HANDLING ANALYSIS

COMPANY:.....NAME:.....

REFERENCE:.....DATE:.....

Goods to be handled:

Type of material (wood, metal, plastic etc):

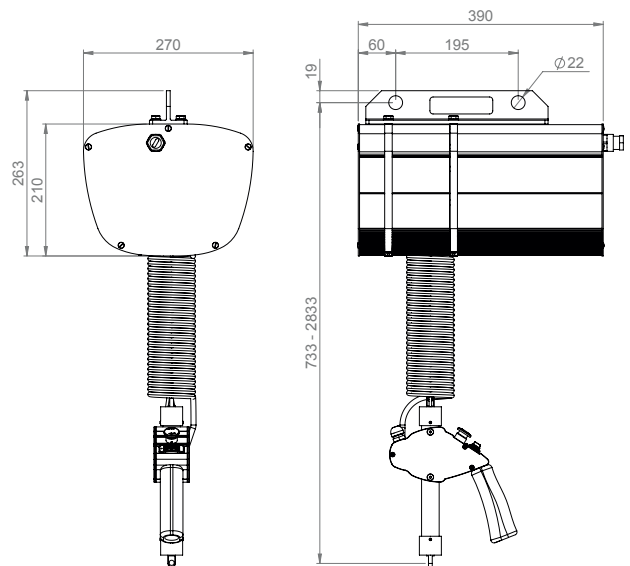
Size of goods (L x W x H/ Ø):

Max and min weight: Max: Min:

Describe surface of the goods:

Frequency of handling (per day):

Other important info:



Suggested suitable type of lift and tool:

Type of lift:

Type of tool:

Type of accessories:

Other important info:

Sketch required below:

13 Check list

CE

- ViperHoist – Tested with kg load.
- Check that the manouvre handle is correctly assembled
- Check emergency stop button.
- Check wire connection.
- Top and buttom switch – check function.
- Check that all bolts/nuts are sufficiently tightened.
- Lubricate the driveshaft and the one-way bearing when assembling.
- Lubricate all bearings.
- Perform a running/function test on the hoist.
- Make sure that the hoist does not make any unwanted noise.
- Make sure that all labels are in place and with instructions in correct language.
- Wipe the hoist clean and prepare it for delivery.

.....
NAME

14 ViperHoist Special project, specification

Deviations from standard construction

You have ordered a ViperHoist from TAWI with one or more special features. This document describes those special features and their effects on everyday operation. This is an important enclosure to the main installation manual and must be made available to all operators at all times, along with the main manual.

All instructions in the above specified documents must be followed. Always refer to the project nr and serial nr below, when corresponding with the manufacturer or its representatives.

| | |
|---|--|
| Project nr: | |
| Model: | |
| Amount: | |
| Serial nr: | |
| Max. lifting capacity (kg): | |
| Specification, tool: | |
| Objects to be lifted: <i>Tooling is custom made, may not be used to lift other objects.</i> | |
| Other: | |

Additional safety aspects:

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